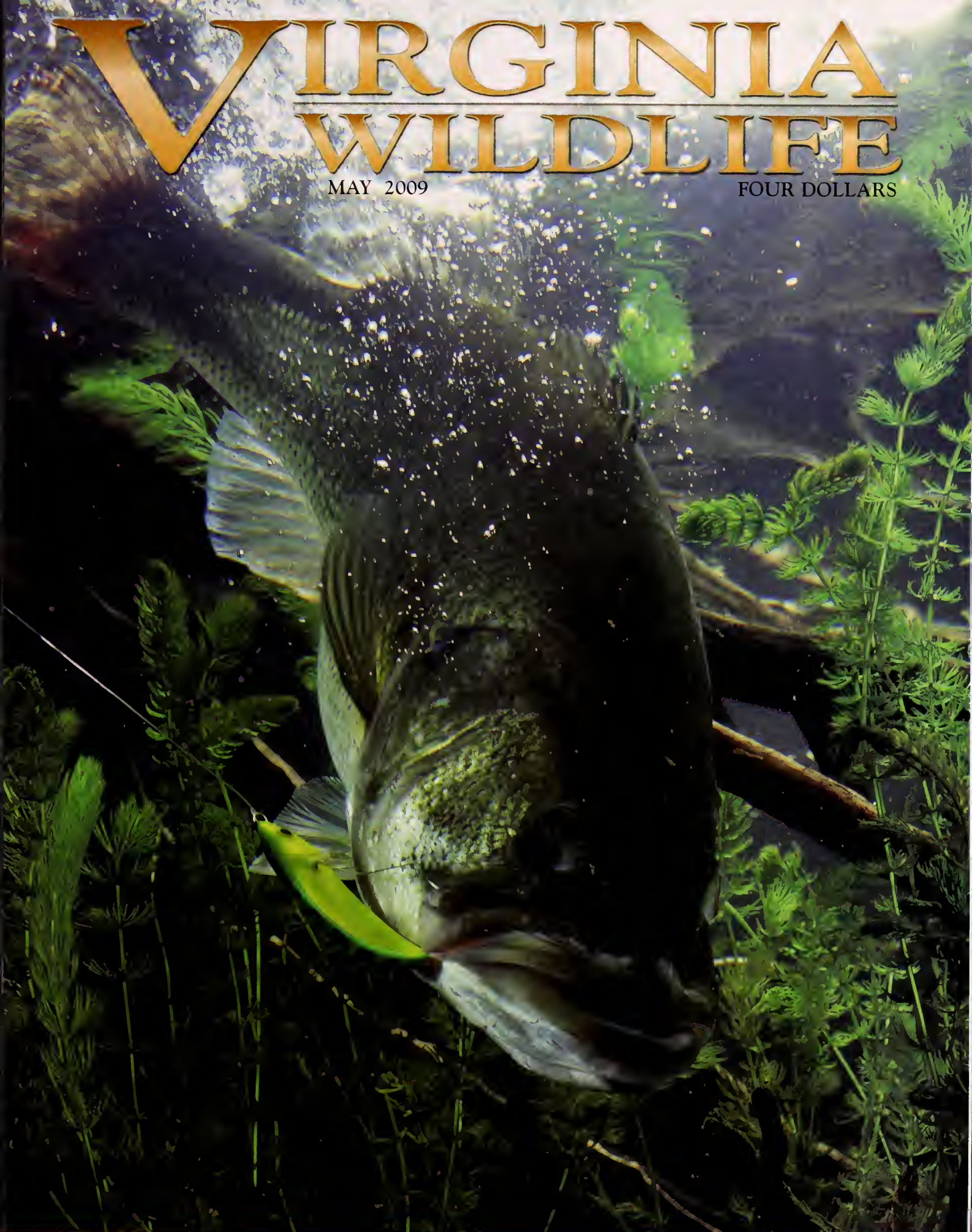
VIRGINIA WILDLIFE

MAY 2009

FOUR DOLLARS



Fishology for Kids • Spring Pool Miracles • A Fundamental Freedom

Commonwealth of Virginia
Timothy M. Kaine, Governor

Bob Duncan
Executive Director

I recently had the pleasure of attending the first statewide tournament of the National Archery in the Schools Program, held in Fishersville. It was blustery and gray outside, but you'd never know it from the excitement, bustle, and noise level inside the expo center. There, some 300 elementary, middle, and high school students from across the state came together to compete and 'show their stuff'—namely, their newly developed archery prowess.

Archery is a sport that, by design, levels the playing field for all participants. It requires skills built upon attention to form and detail, not necessarily strength and endurance. Because of this, many students who might not excel in more mainstream sports can and do succeed in archery. And parents who joined their kids for the day in Fishersville expressed heartfelt gratitude. One mother, with tears welling up, told me that her son had never been able to make a high school sports team until now. This was a day she would never forget. Coaches and parents also report seeing improvements in schoolwork, focus, and self-confidence among students who participate.

Archery, like hunting, is a sport you can enjoy your entire life. You don't need a team or an institutional setting—just a safe place outdoors for target practice. Patience and persistence pay off. As your form and upper arm strength improve, your ability to hit your mark does too.

There is an old adage that for every arrow that goes forward to strike the mark, there is a hand that holds the bow. That was never more evident to me than during this tournament. The kids impressed each and every judge by striking the mark of true sportsmanship, while coaches and parents proved how many good things come from investing time to hold those proverbial bows.

Overall state individual champions of the 2009 NASP tournament, shown here with Executive Director Bob Duncan: Wayne Veldsman, Hidden Valley High School (L); and Sarah Leser, Warwick High School (R).

Mission Statement

To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; To provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation and to work diligently to safeguard the rights of the people to hunt, fish and harvest game as provided for in the Constitution of Virginia; To promote safety for persons and property in connection with boating, hunting and fishing; To provide educational outreach programs and materials that foster an awareness of and appreciation for Virginia's fish and wildlife resources, their habitats, and hunting, fishing, and boating opportunities.

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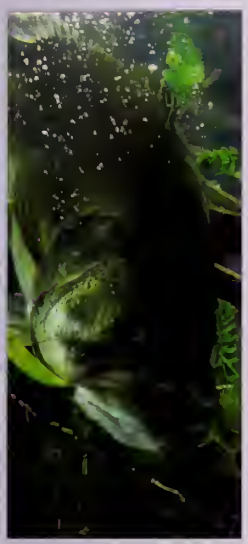
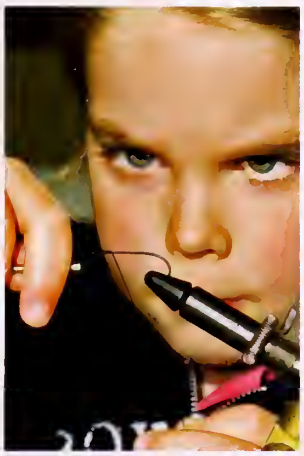
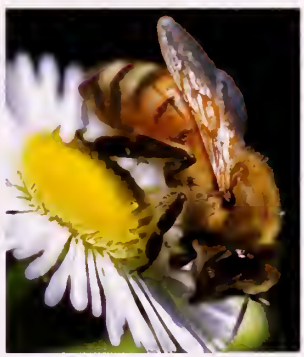


About the cover: Largemouth bass *(Micropterus salmoides)* are active in waters statewide. Take advantage of "Free Fishing Days," June 5–7, and catch yourself one! ©Bill Lindner





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FISHOLOGY

story by Clarke C. Jones
photos by Dwight Dyke

Early one morning, my father and I took our first and, sadly, one of our few fishing adventures together. We headed down the old dirt road built by the Civilian Conservation Corps, which led us to a narrower dirt road lined with trees. As we rounded a bend, a large, shimmering pond greeted us on our right. My father backed the car into a little cut in the woods, and we walked like Andy and Opie down a little path, carrying cane poles and corks and new, store-bought blood worms.

My father put the sectionalized cane poles together, first rubbing the male end on his cheek so his skin oil would act as a release agent when taking the sections apart at the end of the day. We sat on the warped, graying dock that extended out into the pond, took off our shoes, and let our feet soak in the water's warmth. Deftly, he put the worms on the hooks, set the corks, told me to put the line cork and bait in the water with as little commotion as possible, and then… we were fishing!

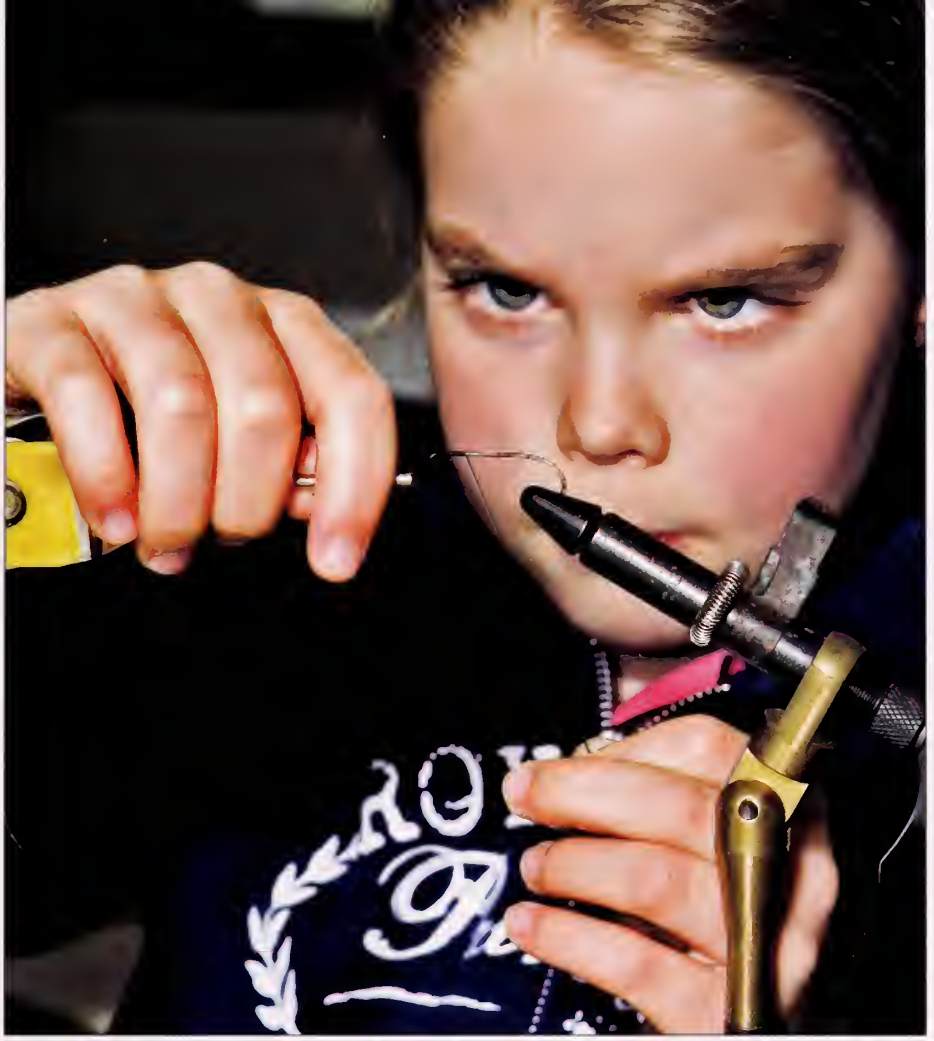
I was five years old, and remember having lots of questions: Can fish smell? Do fish sleep? Where did the worm go? Do fish talk?

"Hey, is that what fish eat?"

My father, after answering enough questions, told me if you want to catch fish, you have to be very, very quiet. He then proceeded to lie back on the dock to see if he might catch forty winks while I caught dinner.

He looked so peaceful with his eyes closed, the sun heating his face, and the warm pond water lapping around his ankles that I hated to ask him one more question—but I did. When I asked my dad if a snake could bite underwater, I didn't think it physically possible that a person, in one rapid motion, could go from lying on their back to standing on their feet. My father can!

I caught four fish that day, but I was the one that was really hooked. Unfortunately, we rarely made many more forays together to that pond, but I still have the memory. Even more unfortunate, however, would be a child who *never* had the unforgettable experience of a fishing trip with his father. In a world of computer games and organized sports, the simple pleasures of taking your child fishing seem to have waned in some



From learning how to tie a fly to proper casting techniques, concentration is key to success.

for Kids

A freak snowstorm triggers a long-standing fly-fishing tradition.

parts of our state, and in the face of creeping urbanization the question often becomes, "*Where* can we go fishing?" The Department's Web site can answer the "where" question. An organization with a most bizarre name, which dedicates itself to teaching young boys and girls not only fishing, but land stewardship and wildlife conservation, can help with the "how to" part.

In April of 1939, a small group of men who had met while fishing the

BOJC member Jeff Wrobel explains casting techniques to young anglers and parents.

year before decided to meet again annually. Most were devout fly-fishermen, who found themselves stranded in their cabin by a freak snowstorm while on the 1940 fishing trip. They began to discuss the future of the sport they loved, and recognized the need to pass their knowledge and love for it to a younger generation, in hopes of instilling their passion for conservation and sportsmanship. They came up with a creed, guidelines, and a formula they hoped would endure long after they were gone which would introduce young people to the outdoors and create a lasting legacy of a love of fishing.

Being fly-fishermen, they chose to name their organization after a feather from a fowl found in India, which was often used as part of a fly lure for trout or salmon fishing. They called themselves the *Brotherhood of the Jungle Cocks*. An unusual name, admittedly, but the Brotherhood was and still is today very serious when it comes to teaching today's youth all the facets of fishing, including stewardship of the planet. Conservation, they felt, is a large part of what makes a fisherman a sportsman.

Perhaps it is more of the intangible lessons that parents and children take with them, which makes a day with the Brotherhood so memorable. The sport of fishing teaches the advantage of being knowledgeable about what you are trying to achieve, and how preparation often is key to success. It teaches that perseverance and patience are tools which will assist you in life.

Today's kids may think that, with all the global warming headlines,

VCU graduate student Matt Beckwith shows a youngster how to use a Secchi disk to measure water clarity.

A smile often speaks as loudly as words when it comes to a prized catch.

stewardship and protection of natural resources are rather recent concerns. But true sportsmen and women have always policed and protected the environment with whatever means they had necessary whenever they saw their sport threatened.

Teaching Young Anglers

The Virginia Chapter of the Brotherhood (or, BOJC) meets every May at Camp Brady Saunders in Goochland County. The entire day is organized for children and parents to keep kids attentive and occupied. It ends with a ceremonial campfire and raffle.

Billy Pearsall of Richmond, who has been president of the Virginia Chapter since 1994, explained why he has remained active in this worthwhile organization. "I enjoy teaching, especially children. Fly-fishing is my passion, so teaching [children] is a perfect avenue for me."

According to Pearsall, the Brotherhood's name, "...has raised a few eyebrows, but [people's] interest is evident." Evidently so; the organization has grown from its parent chapter in Maryland to five other states, including Virginia, underscoring its serious intentions. One only needs to read the organization's creed to realize the devotion its members have to both youth and the environment.

"Fishology" could be the proper term, or the central theme, describing the organization's annual meeting. Child and parent learn about different baits, how to tie a fly, proper casting techniques, fishing safety, and fish habitat.

One of the highlights of the day for adults and children alike is the program by Dr. Edward Crawford of Virginia Commonwealth University and his graduate students. Dr. Crawford has the unique ability to hold everyone's attention when talking about aquatic habitats, and the relationship between terrestrial and aquatic environments. As Dr. Crawford put it, "I think the hands-on activities, in a field setting, really help kids and adults alike gain a better understanding of the concepts we are trying to convey. I hope the knowledge gained from the program experience leads to a better understanding of aquatic environments. That will hopefully lead to an appreciation for and foster a sense of stewardship toward these ecosystems."

Perhaps it is more of the *intangible* lessons that parents and children take with them, which make a day with the Brotherhood so memorable. The sport of fishing teaches the advantage of being knowledgeable about what you are trying to achieve, and how preparation often is key to success. It teaches that perseverance and patience are tools which will assist you in life.

As Ed Deiss, a father who has attended these outings for the past four years, stated, "I won't soon forget the first year my son and I went and what I witnessed. All day he was trying to catch a fish and not having much suc-

Morgan Rawls (R), also a VCU graduate student, teaches a young attendee how to use an Aqua Scope to view life underwater.

cess. I saw in him something I had not seen before in that he spent *hours* trying to catch a fish ... baiting and re-baiting hooks and casting and casting and casting ... and he finally caught one. I had not seen the patience and perseverance in him until that day, and it is one of the reasons I keep coming back."

The chance for father, son, or daughter to spend time building life's memories together is truly quality time. Again, Ed Deiss: "We keep coming back because I want to have this impressionable memory with my kids, and fishing affords time free from distractions, to talk, share, learn, and just be together. I learned from my father that it sure is hard to have *quality* time, if you don't have *quantity* time."

It is never too early to learn how to fish and make this event a family affair. The Leathers family has been coming here for about six years. Candy Leathers, mother of son Kyle, 12, and daughter Amber, 8, offered this testimonial: "There are a number of excellent presentations, including fly-tying for the beginner and advanced. The highlight for our family is the catered dinner and raffle prize drawing at the end of the day. The kids are so excited during the raffle as they go up to the prize table and pick out a nice prize. Kyle likes the fishing. Amber says she likes having fun with her dad. It has become a tradition to come to the BOJC event."

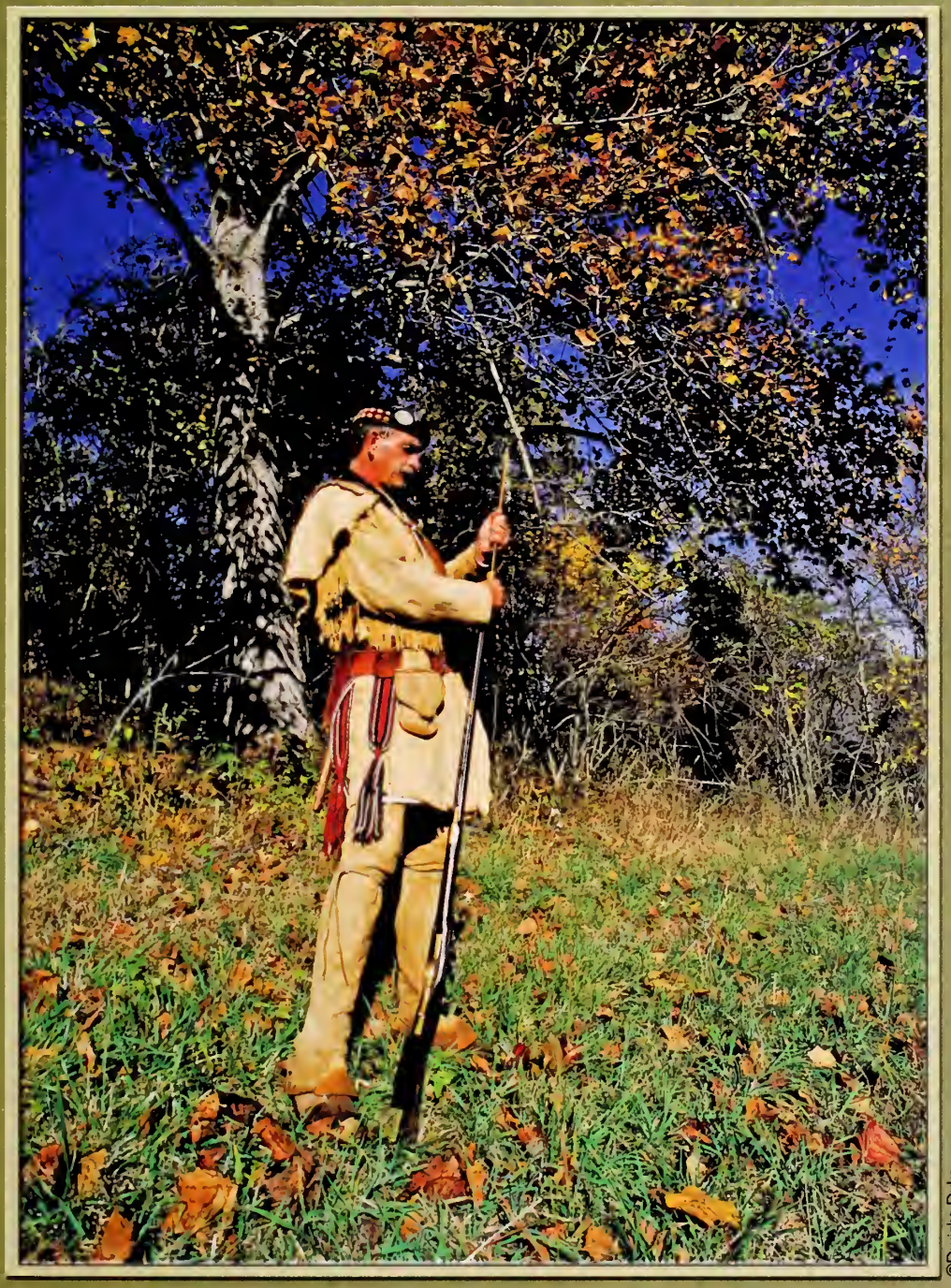
If part of being a parent is teaching your children the attitudes and skills which will guide them through life and prepare them for both the disappointments and triumphs which lie ahead, teaching them the intricacies of fishing is a good way to start. And if creating lasting memories for your children is part of the legacy you hope to leave behind, participating in a program with the BOJC is a good place to start.

Ed Deiss put it best when asked what he and his children have been able to learn from attending this program, "I reference this day when it comes to Will and Rachel supporting each other. Reminding them of this day has made me appreciate the time we had together, how proud I was of them, the memorable conversations without any deadlines or other agendas, and how much we look forward to doing it all over again next year. The Saturday before Mother's Day in 2009, I know exactly where we will be." □

Members of the Brotherhood teach the art of tying flies to a captive audience, who put their new skills to good use (below).

Clarke C. Jones is a freelance writer who spends his spare time with his black lab, Luke, hunting up good stories. He can be reached at www.clarkecjones.com.

Editor's Note:
Billy Pearsall, President of the BOJC, can be reached at billy.pearsall@gmail.com.



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A Fundamental Freedom

by William H. Funk

Retaining future hunting opportunities through land preservation.

English colonists came to Virginia fleeing a broad range of restrictive or prejudicial systems, ranging from religious persecution to economic stagnation to an ingrained aristocracy which had since the Dark Ages withheld for itself the use of natural resources. This last unilateral retention included the Old World's wild animals and the royal preserves they inhabited.

As the European population spiraled upward with the advent of agricultural feudalism, the vast forests and fertile plains of the continent were quickly exhausted of trees and game under increased pressure for human sustenance. Only in the protected lands surrounding the liege's stronghold could ecosystems be found that reflected, albeit on a much reduced scale, the lushness that once characterized primordial Europe. From their opulent fortifications, built and supported by the labor of their own serfs, the feudal lords and ladies would at times have occasion to saunter off on a hunt, their extensive procession of attendants, gamesmen, houndsmen, callers, bearers, and soldiery in tow.

The starving peasantry of the Middle Ages occasionally made desperate forays into the royal hunting preserves when their allotted rations of tubers and grains were exhausted, but the nobility's monopoly over wild game and wilderness areas was explicit, sincere, and pitilessly enforced. To quell possible thoughts of insurrection, peasants were everywhere forbidden to own swords, spears or flails (or, later, firearms; it was this tyrannical domination that encouraged the enshrinement of the Second Amendment to the U.S. Constitution). As well as being drafted to serve as unpaid bush beaters and game cleaners for noble hunters, the serfs were savagely reprimanded if caught poaching their lord's game animals. Penalties regularly included blinding, castration, and death by exposure or equally inhumane methods.

Because of the gross injustices of the Old World division between hunters and non-hunters, hunting in America began and to some extent continues as an unheralded democratic exercise, an opportunity to live off the fat of the land like no working-class European ever could, or can to this day. As aristocratic hunting practices ossified in elaborate courtly custom of the time, the hunting initiative among the dispossessed peasantry became associated with freedom, liberty, and honest rebellion. For the European poacher, as for the early American settler and all the world's peoples who depended for at least part of their nourishment upon the

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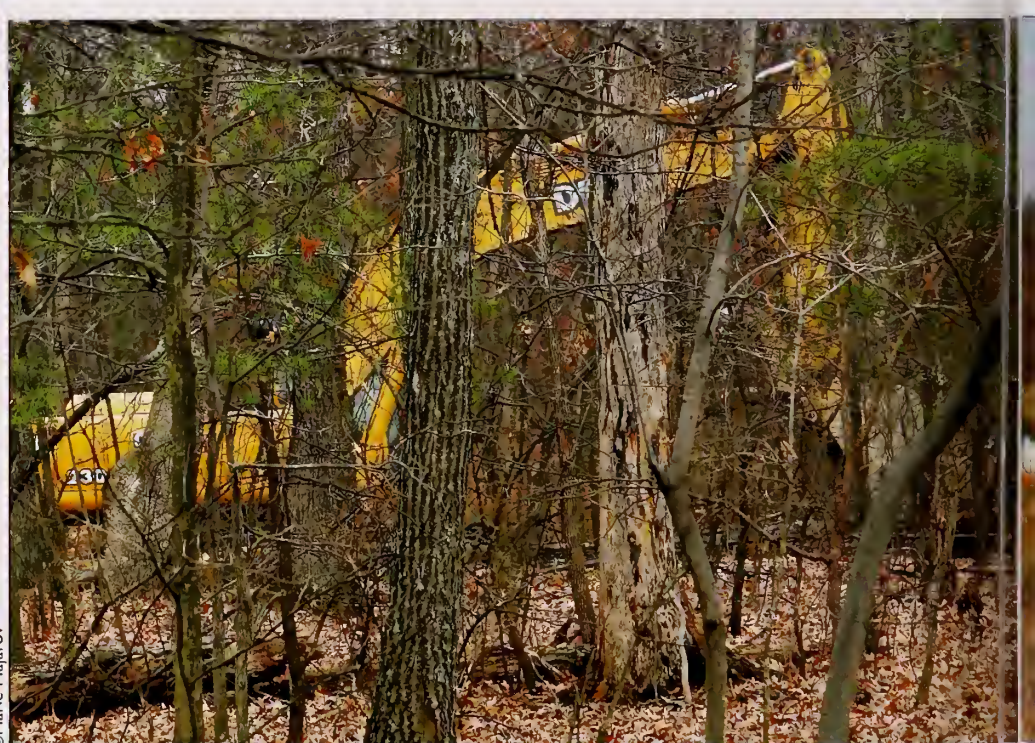


©Marie Majarov

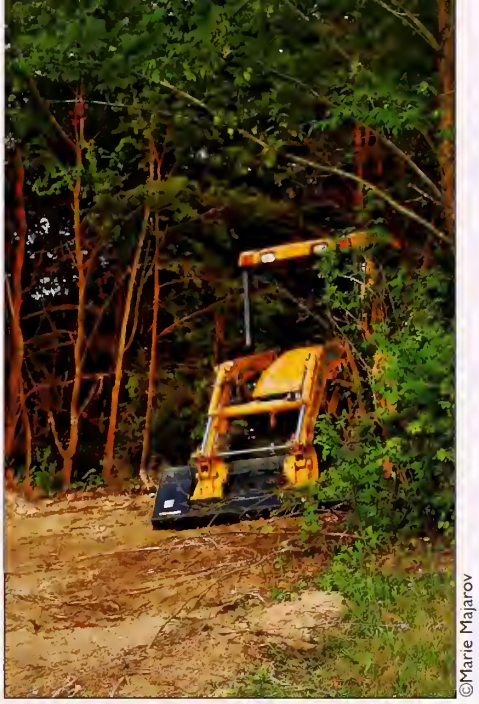
As trees fall to the maw of industrial machines, important habitat is lost for wild game and other forest dwellers.

beasts of the wild wood, the purpose of hunting was simple, honorable, and unquestioned—meat.

Fast Forward

The domestication of the North American continent has proceeded apace for four hundred years, and today Virginia's viable wildlife habitat is limited to public lands and to those private properties fortunate enough to have owners interested in providing undeveloped acreage for wildlife survival. As is the case with federal habitat protection funded by duck stamps and taxes on firearms, ammunition, and related items, it is primarily hunters who have stepped forward to offer our remaining wildlife a place to live.

At the risk of stating the obvious, the chief threat to existing wildlife habitat held in private hands is destruction and fragmentation brought on by development—residential, commercial, and industrial. When the woods have been clearcut and paved over, when the fields are sold off and houses planted on their wasted fertility, they are lost forever to the animals that once lived there. Backed into increasingly isolated pockets of habitat, species dependent upon large, intact swaths of land—such as bears and wood warblers—wink out one by one, leaving behind a razed landscape of highways, suburbs, and shopping malls.



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Hunt clubs donate easements because their members want to permanently protect wildlife habitat and the various improvements—food plots, tree plantings, ponds, vegetated streambanks, hunting cabins—that they have often invested a great deal of time and money in.

We are a nation founded on individual liberty based on the wise use of our natural world, and while few of us any longer make a living solely from the earth, the retention of our hunting heritage is absolutely necessary to the continuing existence of privately-owned wildlife habitat. Allowing the remnants of healthy wildlife habitat to be devoured in the insatiable maw of development is a transgression of the highest order. Those who take positive steps to preserve the existence of our fellow creatures take an honorable, indeed patriotic, stand in favor of a glorious hunting heritage which still offers us an unparalleled intimacy with the living earth.

Coming to Grips with Habitat Preservation

Many farmers and other large landowners feel the eventual development and loss of their land to be inevitable. "You can't stop progress" is the hopeless mantra often resorted to. In fact, the premise that selling out to development is an inescapable fate for rural landowners is wholly false, thanks to an array of federal and state laws drafted specifically to preserve the public's rural and hunting heritage. State income tax credits and federal income tax deductions are available to Virginia landowners who wish to keep their farmland and wildlife habitat open and productive.

Conservation easements are the foremost means of permanently protecting lands held by private citizens. Simply put, a conservation easement is a legal agreement between a landowner and a non-profit organization or government entity that places limits on how the landowner's property will be used in the future. The landowner gives up the right to intensively develop his property because he wants his farm or hunting

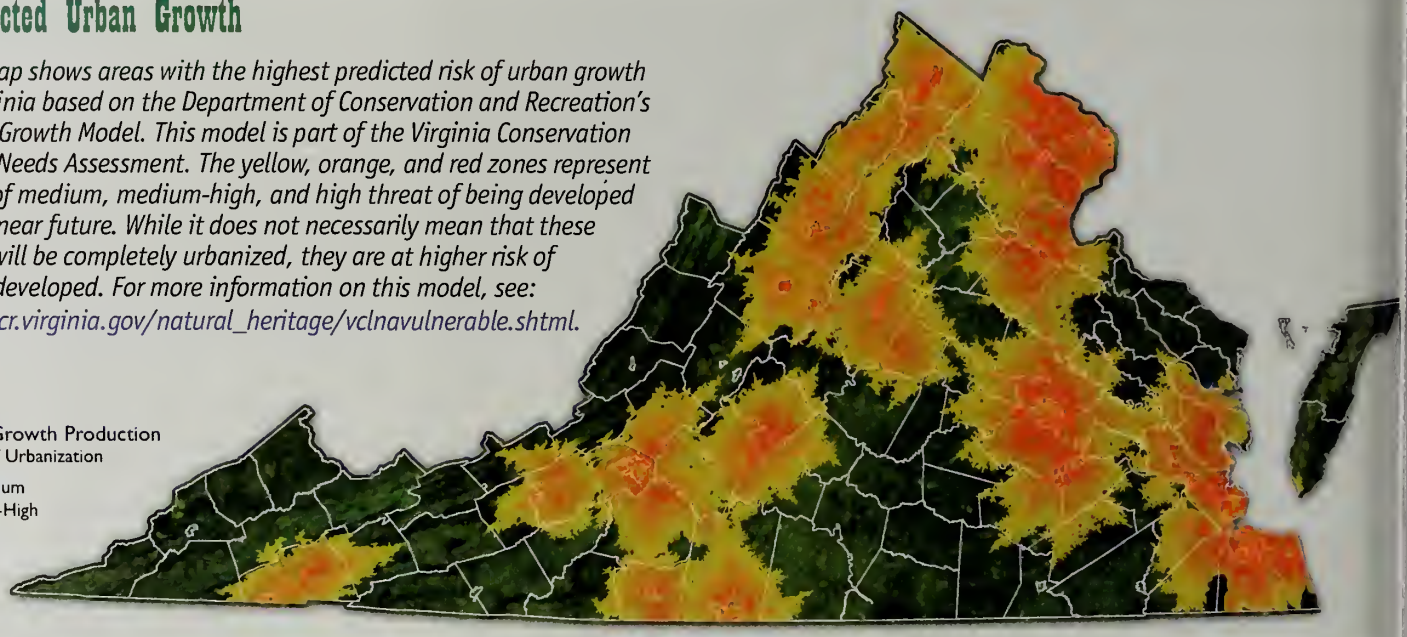
(continued on pg. 13)

©Marie Majarov

Growth in Winchester has expanded rapidly into areas previously forested and farmed. Here commercial development encroaches upon an apple orchard.

Predicted Urban Growth

This map shows areas with the highest predicted risk of urban growth in Virginia based on the Department of Conservation and Recreation's Urban Growth Model. This model is part of the Virginia Conservation Lands Needs Assessment. The yellow, orange, and red zones represent areas of medium, medium-high, and high threat of being developed in the near future. While it does not necessarily mean that these areas will be completely urbanized, they are at higher risk of being developed. For more information on this model, see: www.dcr.virginia.gov/natural_heritage/vclnavulnerable.shtml.



VDGIF-GIS Lab, Courtesy of Dave Morton

Albemarle County: A Profile of Rapid Change

VGIN-VA Base Mapping Program, ©Comm. of Virginia

This pair of aerial photographs reveals a rapidly suburbanizing area southwest of Charlottesville. Jessups Lake is in the western portion of the picture and Old Lynchburg Road is just east of these images. In 2002 (top), the area is mostly upland forest with pasture surrounding the lake. Five years later in 2007 (bottom), several roads bisect the forest to service nearly 100 new houses. Further development is evident around the lake, with new roads and bare soil.

Albemarle County has so much going for it that its current rate of open space being lost to development seems almost inevitable. Capitalizing upon the cultural mystique of the University of Virginia and Monticello and abetted by Charlottesville's recent ranking as the "best place to live in the U.S." by a number of national publications, real estate developers are busily facilitating the time-honored tradition of loving a beautiful place to death.

Property values have become so bloated that less wealthy natives are sometimes forced to relocate to Waynesboro and eastern Augusta County and commute to their place of origin. The Highway 29 corridor of heavy commercial development has spawned leapfrogging suburban development northward to Greene County, while I-64 access is rapidly transforming the western hamlets of Ivy and Crozet into pricey retirement destinations. Symptomatic of the real estate ideology is the debasement of Thomas Jefferson's name as an evocative marketing tool; the founding father most concerned with the dignity and liberty of independent rural freeholders is thus enlisted as unwilling agent to the ruin of his beloved agricultural homeland.

With development continuing to spiral outward from the greater Charlottesville area, property tax assessments will continue to climb, endangering the ability of rural landowners to keep their farms intact and productive of agricultural goods and wildlife. Hunting traditions disappear as the county's old family farms are cordoned off as "ranchettes" owned by wealthy newcomers who are often antithetical to the hunting tradition.

But Albemarle landowners, both the long established and the newly transplanted, are recognizing the exquisite loveliness of their surroundings and are becoming regional leaders in land preservation. Those wishing to see their farms, vineyards, and private estates preserved intact over the long term have an ally in professional conservationists who stand ready to assist them in the drafting and implementation of conservation easements, easily the most productive and satisfying means of permanently protecting the beautiful landscapes still to be found in Albemarle County.

habitat to always be available in its natural state. A conservation easement is legally binding on all future landowners and will protect the land from inappropriate development and uses in perpetuity while allowing the landowner to retain the rights of private ownership. Because this donation benefits the general public, the state and federal governments offer tax benefits to those who preserve their land and its traditional uses.

Individual landowners donate conservation easements to preserve family legacies and the scenes of irreplaceable memories of years spent together in the fields and forests. Hunt clubs donate easements because their members want to permanently protect wildlife habitat and the various improvements—food plots, tree plantings, ponds, vegetated streambanks, hunting cabins—that they have often invested a great deal of time and money in. Conservation easements are a proven means of preserving our heritage from the mindless destruction that every year deprives our descendants of the hunting opportunities that we grew up with.

A Necessary Sea Change

The wildlife species of Virginia have proven to be remarkably adaptable, often possessed of sufficient resiliency to shape their lives around our arbitrary activities. The more generalist a species is, the more it is able to exist in a variety of conditions and potentialities, the better its chances of navigating the broken fragments of habitat we have left them. Yet such is the extent of damage that has been wreaked on this continent: Landowners must often commit to active management of their properties for game species to be plentiful. Meticulous easement drafting and professional tax advice result in conservation easements that can enhance hunting opportunities while assuring that the land remains protected from inappropriate development.

With only 13.69% of Virginia's 25.27 million acres "under protection" (meaning under conservation easement or owned by federal, state, or local government), the vast majority of land in the state is *privately* owned and currently unprotected from development. Diverse forests contain the greatest terrestrial biodiversity in the state, and as of 2004, private property owners held title to 12,983,849 of the commonwealth's 15,308,778 forested acres.

©Marie Majarov

Conversion of farms into large housing tracts is changing the character and pace of life in Frederick County for both people and wild animals.

Preservation of *private* properties that maintain functioning ecosystems must therefore be of primary importance to those who care about wildlife and the outdoors. If these landscapes are not preserved, we will become increasingly disassociated from the natural world, less genuine in our empathy, less involved in our responsibility, and finally altogether indifferent to the fate of wildlife and the wild earth.

If land conversion rates remain as they are now, we will see made real what the map on page 12 so clearly depicts: the galloping extension of wave after wave of residential and commercial development linking city to city and suburb to suburb, with frenzied freeways spreading like spider veins and, the end result, a sprawling megalopolis with only a few detached pockets of green left open.

But this is merely a prediction and assumes that present trends will continue. It doesn't have to look like this, and the decision is up to us. □

William H. Funk is a lifelong hunter living in Staunton who is a member of the Virginia State Bar and the Outdoor Writers Association of America. He has previously written articles about wildlife, wilderness, and conservation for Virginia Wildlife *and may be contacted at wfunk@conservationpartnersllc.com.*

A fuller explanation of how the easement process operates in Virginia may be found in the Nov. 2008 issue of *Virginia Wildlife* or at www.dgif.virginia.gov/virginia-wildlife/special-feature.asp.

Resources

- Department of Conservation and Recreation, Land Conservation www.dcr.virginia.gov/land_conservation/index.shtml
- Virginia Outdoors Foundation www.virginiaoutdoorsfoundation.org
- Department of Forestry www.dof.virginia.gov/resinfo/forest-ownership. shtml
- Conservation Partners, LLC (540) 464-1899 www.conservation partnersllc.com

Saving Virginia's

story and photos
by Marie Majarov

This bluebird chick offers a close-up view of his new metal band.

The tale of the charming, azure-colored, eastern bluebird, *Sialia sialis*, with its rich red breast, crisp white underparts and lilting song, is one of remarkable conservation effort and success.

Eastern bluebirds, and their fellow mountain and western species, are found only in North America. Early colonists dubbed them blue robins, a not unreasonable identification as both robins and bluebirds are thrushes, *Turdidae*, having long legs, short narrow bills for grasping prey, and keen eyes for dropping from perches to capture insects—their primary food source.

Weighing just over one ounce, bluebirds interestingly have no blue pigment; their dazzling color is the result of light waves scattered through distinctively structured feathers. Males are vibrantly colored, advantageous during mating, while the female's drab dress seems to afford busy moms less visibility to predators. Young have the striped breast commonly seen in other thrushes.

Bluebird Existence Threatened

Preferring open habitats with scattered trees and shrubs, bluebirds thrived as early settlers cleared fields for farming. Secondary cavity-nesters, bluebirds chose abandoned woodpecker holes, natural cavities in wooden fence posts, and decaying old tree limbs. Population numbers soared, before plummeting perilously by as much as 90 percent in the late 1800s and throughout most of the twentieth century.

Multiple factors coalesced to cause this decline. Quickly proliferating European starlings and Old World house sparrows, imported for sentimental and misguided conservation motives, aggressively invaded and occupied available nest-cavities. Metal fenceposts replaced wooden ones. Pesticides tainted insects upon which bluebirds fed. And finally, between 1930 and 1960 dead wood and decaying trees were

"The bluebird carries the sky on his back."

–Henry David Thoreau

Bluebirds

Both male and female bluebirds are active in feeding the young.

cleared at record rates by newly invented gas-powered chainsaws, eliminating many homey woodpecker-excavated cavities. While a difficult era for woodpeckers and other native cavity-nesting birds (tree swallows, house wrens, tufted titmice, and Carolina chickadees), it was devastating for the mild-mannered little bluebird.

Help came. The North American Bluebird Society (NABS), the Transcontinental Bluebird Trail network, and state organizations like the Virginia Bluebird Society (VBS) organized to address the challenge of saving the beloved bird. Countless individuals and community organizations such as the boy scouts constructed wooden nest boxes to replicate natural homes. Trails of multiple boxes soon meandered through fields, open woodlands, even golf courses. In the 1980s, bluebird population numbers finally began to increase slowly but steadily.

A Special Bluebird Trail

The 110-box Shenandoah Audubon Blandy Bluebird Trail (SABBT) is operated solely by volunteers and nestled into the picturesque, low rolling hills of the 700-acre State Arboretum of Virginia, home to the University of Virginia's research field station, the historic Blandy Experimental Farm in Clarke County. This trail, established in 1994, is a shining example of providing habitat, education, and research appropriate to effectively promote the recovery of eastern bluebirds and other native cavity-nesters in Virginia.

Kaycee Lichliter and Greg Baruffi, avid birders well schooled in ornithology and environmental science, took on the role of trail coordinators in 2004, developing a comprehensive protocol for data collection and training citizen-scientist monitors. Presently, Kaycee works tirelessly with a close-knit team of 50 individuals who monitor each trail box weekly during breeding season, from late February until early September.

Nesting materials identify box residents. Bluebirds build smooth, intricate nests from dried grasses for clutches of 4 to 5 delicate, pale blue eggs. Chickadees lay tiny red-speckled eggs in moss nest-cups; tree swallows choose fluffy feathers to protect snow-white eggs; and lively house wrens prefer a more ramshackle col-

Right: *Bluebirds lay clutches of 4 or 5 delicate blue eggs in nests of intricately woven fine grasses.*

Enthusiastic students regularly monitor the "Greg Baruffi Bluebird Trail."

Baruffi's Bluebird Trail

Whispers and excitement resonate through Timber Ridge School, a licensed residential treatment and accredited educational program serving adolescent boys with a history of serious emotional, learning, and behavioral difficulties.

"Yippee! The eggs in box 2 are hatching this morning ... white eggs in box 6 ... a tree swallow is nest building in box 8!" Oh, the pride a responsible bluebird trail monitor feels!

Greg Baruffi, President of the Shenandoah Audubon Society, four years SABBT co-coordinator with Kaycee Lichliter, and Timber Ridge wood working instructor, constructed 10 nest boxes with 'his boys' and arranged a bluebird trail on the school's beautiful 210-acre campus west of Winchester. Emanating a love of bluebirds and all wildlife, "Baruffi," as his boys called him, "... made a tremendous impact on his students, as they did likewise on him," said Kaycee, who now oversees the trail operation. Gifts of nature can be powerfully therapeutic.

On December 18, 2007, Greg tragically lost his life in a motor vehicle accident. He is deeply missed at Timber Ridge, on the SABBT, and throughout the Winchester area. The boys held a heartfelt service for their teacher and maintain the "Greg Baruffi Bluebird Trail" in his honor. Through bluebird conservation, outreach, and education these boys were touched deeply and are more firmly on the path to becoming not only productive members of society, but active stewards of our environment.

lection of sticks for their pinkish eggs and build frequent dummy nests that take up precious box space.

The season is busy; bluebirds usually have 2 or 3 broods each year. Nests are not removed after chicks fledge, so second broods can be quickly started in the same nest. Each box is regularly inspected for damage, wear, and predation. Raccoons and black rat snakes are common predators of bluebird eggs in Virginia. Antagonistic house sparrows, as well as petite native house wrens, will all too frequently pierce and destroy bluebird eggs in a self-serving attempt to usurp potential nest sites for their own species.

Kaycee meticulously calculates what she calls the 'critical nesting period' when bluebird chicks are active and could easily fledge prematurely, greatly decreasing their chances for survival. Boxes are not opened for monitoring during this 14-day time period.

Work proceeds under the required Federal Banding and Virginia Scientific Collection permits issued to the VBS, which vigilantly protect wildlife captured and released during research. (It is a violation of federal and state statutes to handle any non-game birds without appropriate permits and/or licensed wildlife professional supervision.) Master Bander Kaycee uses the 'banding window' of the 8 to 12 days after hatching to fit chicks with uniquely numbered metal bands around their right tarsus, and colored bands on the left tarsus. Each season is indicated by a different color band. Measurements of mass, wing cord, and tarsus length are noted before each chick is carefully placed back in the nest with newly banded feet tucked under its body. Colored bands can be easily seen with binoculars and greatly facilitate the identification of birds in the field.

Charles Clevenger, who in 1994 first established the SABBT with Colonel Sam Patten, Ret., continues to volunteer and regularly monitor with Kaycee.

Measurements of tarsus length, wing cord, and mass are carefully recorded at banding time. Here tarsus length is measured.

Removing chicks for banding must be done very carefully to prevent premature fledging.

Such enables observations that will increase our understanding of bluebird behavioral patterns and migratory habits.

Notes on nest completion, first egg date, number of eggs and hatches, coloration, hatching dates, fledge date, and number fledged are recorded in precise detail by the SABBT team. Data are submitted yearly to NABS, VBS, the Cornell Lab of Ornithology's NestWatch in Ithaca, NY, and the U.S. Geological Survey, Patuxent Wildlife Research Center Bird Banding Laboratory in Laurel, Maryland. By cataloguing citizen-scientist observations of avian life history traits, researchers are better equipped to understand such issues as productivity and survivorship, site fidelity and migration, first egg dates in relation to climate change, and habitat needs. The DGIF also utilizes part of the trail's data to enlarge the Virginia Fish & Wildlife Information Service database, which facilitates informed environmental decisions regarding wildlife conservation.

Virginia is on the northern fringes of the bluebirds' wintering territory. Many spend the winter here, frequently seeking protection from cold and stormy conditions in nest boxes, while others head unknown distances south. From late September to early November, some bluebirds from more northern climes fly south, joining our year-round residents to wait out the winter season. Wintering as far north as possible provides early access to highly sought-after breeding territories in the spring.

A Continuing Process

Bluebird trails, backyard bluebird boxes, and devoted volunteers have engendered unprecedented success in enabling the bluebird to begin thriving again in Virginia. Kaycee proudly reports 225 bluebirds successfully fledged from the SABBT in 2008. The VBS reports a 2007 total of 11,088 fledglings across the commonwealth. In the larger scheme, monitoring and protecting the bluebird population also yields vital collateral information concerning numerous other birds and wildlife.

Get involved: www.virginiabluebirds.org has information on building bluebird boxes, placing them in advantageous locations, and monitoring; grants are available for trails on public lands. Berries from plantings such as holly, dogwood, bayberry, winterberry, serviceberry, hawthorn, sumac, privet inkberry, and Virginia creeper are winter foods much appreciated by hungry bluebirds when insects are scarce. You, too, can help save Virginia's bluebirds. □

Marie and Milan Majarov (www.majarov.com), are clinical psychologists, nature enthusiasts, and Virginia Outdoor Writers Association members. They maintain a bluebird trail and butterfly garden at their Winchester home.

For More Information

Books:

Captivating Bluebirds: Exceptional Images and Observations, by Stan Tekiela. Published by Adventure Publications, Inc. 2008.

Wild Bird Guides: Eastern Bluebird, by Gary Ritchison. Published by Stackpole Books, 2000.

Web Resources:

North American Bluebird Society
www.nabluebirdsociety.org

Bluebird Nestbox Specifications
www.nabluebirdsociety.org/eastwestbox.htm

Virginia Bluebird Society
www.virginiabluebirds.org

The University of Virginia's Blandy Experimental Farm
State Arboretum of Virginia, Boyce
www.virginia.edu/blandy/

Timber Ridge School
www.timber-ridge-school.org/

Tree swallows use fluffy feathers to line their nests; their eggs are pure white.

Deeply speckled chickadee eggs are placed in nests of moss and soft bits of feathers.

Frog Egg Mass

Miracles in a

story and illustrations
by Spike Knuth

Among the most fascinating life cycles in the world of wildlife are those of the amphibians; not only fascinating but relatively short, making observation possible from beginning to end. Amphibian comes from the Greek word, "amphibios," meaning "double life." It refers to the fact that amphibians begin life as aquatic creatures with gills and metamorphose into air-breathing animals with lungs. Amphibians include salamanders, frogs, and toads. Most breed during spring, although a few breed in early fall; most also lay eggs in strands, clusters, or singly, which attach to submerged vegetation or other underwater debris. Exceptions include salamanders of the Plethodon genus and the Aneides genus that remain on land and lay their eggs terrestrially, or subterranean, in underground cavities, in decaying logs, or in moist rock crevices. The eggs hatch into larvae—in the case of salamanders, or tadpoles—in the case of frogs and toads. After a time, they change into air-breathing adults that can hop, crawl, and swim.

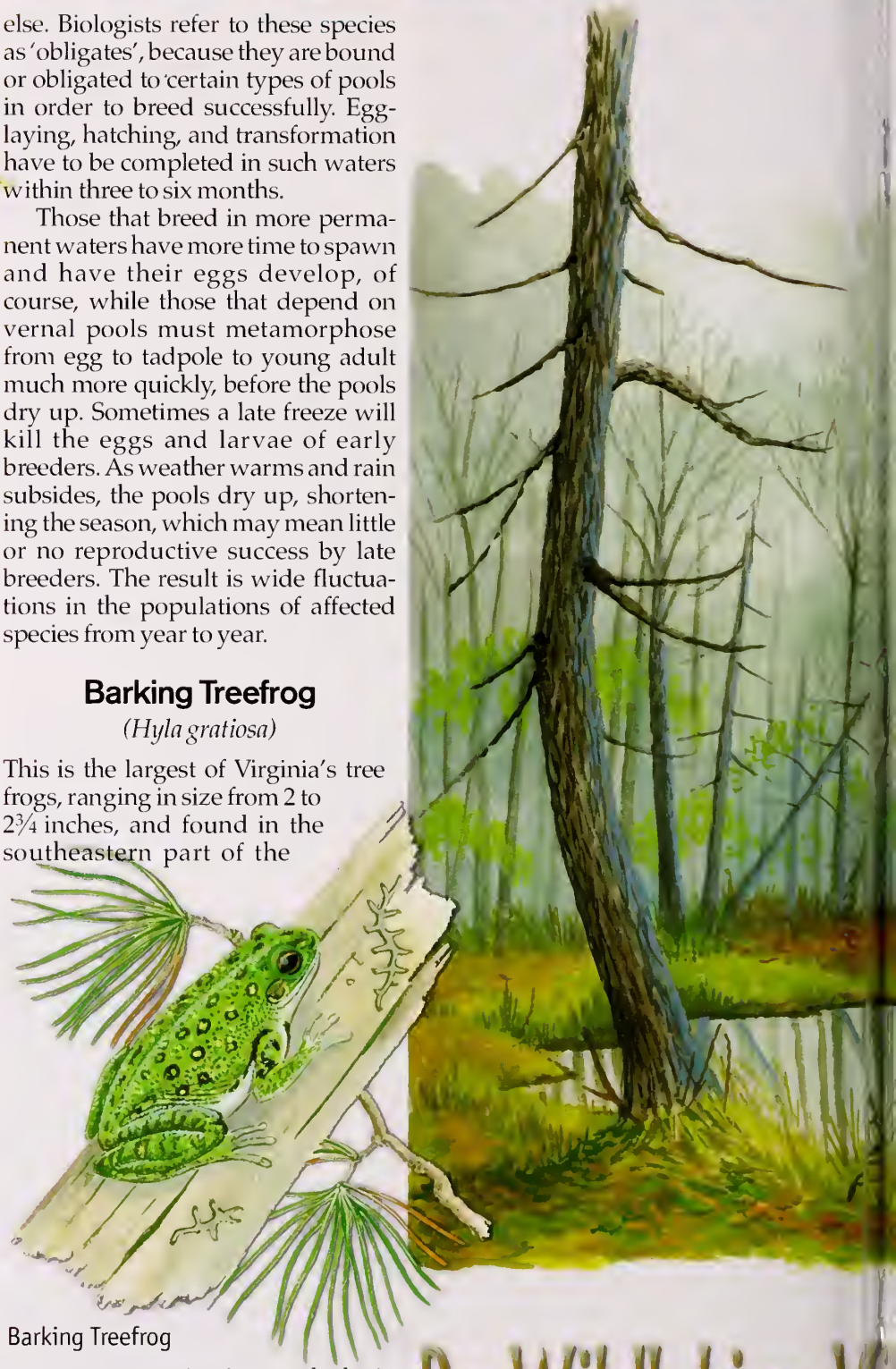
To complete their life cycle, amphibians depend upon a water source: ponds, marshes, swamps, and streams, or areas adjacent to them. However, some species rely on vernal, or spring, pools that are shallow and hold water for only a short time. Normally hard-bottomed with no outlet for runoff, they may only be a few inches deep. They provide breeding habitat for certain amphibians that seldom breed anywhere else. Biologists refer to these species as 'obligates', because they are bound or obligated to certain types of pools in order to breed successfully. Egg-laying, hatching, and transformation have to be completed in such waters within three to six months.

Those that breed in more permanent waters have more time to spawn and have their eggs develop, of course, while those that depend on vernal pools must metamorphose from egg to tadpole to young adult much more quickly, before the pools dry up. Sometimes a late freeze will kill the eggs and larvae of early breeders. As weather warms and rain subsides, the pools dry up, shortening the season, which may mean little or no reproductive success by late breeders. The result is wide fluctuations in the populations of affected species from year to year.

Barking Treefrog

(Hyla gratiosa)

This is the largest of Virginia's tree frogs, ranging in size from 2 to 2¾ inches, and found in the southeastern part of the state. It is a stocky frog with thick, leathery, rough skin covered with little bumps. It has a large head and hands that have big disks on the fingertips for gripping. It varies in col-



Barking Treefrog

Be Wild! Live Wi

Spring Pool

Little Grass Frog

Vernal Pool

ors from bright yellow-green to dark green to various shades of brown, spotted with brown, white, and yellow.

Its call is a sharp "doonk" or "toonk," and from a distance combined calls are likened to the barking or baying of dogs. Primarily nocturnal, barking treefrogs inhabit tree tops during the warm months, but during dry periods and winter they will come down to burrow in the ground under the roots of trees, shrubs, or clumps of grass.

Breeding takes place from March through August. Eggs are laid usually after a heavy rain, and they depend heavily on the resultant, ephemeral pools. Females deposit about 2,000 eggs.

Little Grass Frog

(Pseudacris ocularis)

The smallest of North American frogs is found in the southeast corner of Virginia's Coastal Plain and measures only 7/16 to 5/8 inches. Its base colors vary from tan, brown, gray green, or even pinkish, with a white or yellowish chest. It has dark lines through the eye and along the sides, with a dark band down its back from between the eyes to the rear.

The little grass frog's call is a high, shrill insect-like "set-see, set see," which is likened to the tinkling of glass or a large chorus of crickets. It lives and breeds in wet, grassy areas around ponds, ditches, bogs, and wooded swamps, as well as the all-important spring or vernal pool. Here it climbs about on vegetation, seldom going higher than a foot or two above the ground. It feeds on small insects, and while it is mainly nocturnal, it is often active during the day, especially in swales and wet, open fields.

Breeding occurs in January and February, resulting in about 100 cream-and-brown-colored eggs.

Mountain Chorus Frog

(Pseudacris brachyphona)

A small frog of 1 to 1½ inches, it is olive-brown to green in color and has back-to-back, crescent-shaped dark stripes which often touch to form an irregular "X." The belly is yellowish and there are broad lateral stripes through the eye to the groin area.

Mountain Chorus Frog

Its voice is a rapid series of high-pitched squeals, usually uttered during breeding from February to April. The mountain chorus frog inhabits mountain woodlands, mainly on forested slopes and ridges at elevations of at least 3,500 feet. Breeding takes place in shallow pools in or at the edges of forests, or in ditches, streamside pools, or pools fed by

spring seeps. The eggs are laid in masses of 10 to 50, which attach to vegetation until they hatch into tadpoles in about eight weeks. It is mainly a nocturnal species and is found all along the Appalachians.

Carpenter Frog

(Lithobates virgatipes)

This frog is often called the sphagnum frog because it is associated with the sphagnum bogs found in southeastern Virginia, where it lives. The carpenter frog measures 1⅝ to nearly 3 inches long. Its colors are brownish-green with yellow or golden-brown stripes down its back, with dark spots and marks. It has a white to yellow underside.

Its call is described as "pu-tunk, pu-tunk, pu-tunk," double-rapping notes that are likened to two carpenters hammering nails in close rhythm. Large choruses sound like many carpenters hammering away.

In addition to sphagnum moss, carpenter frogs are also found in emergent or grassy vegetation around old ponds, swamps, swales, and canals full of brown-stained, acidic waters. It is seldom found far from water. Breeding begins in April, with eggs attaching to vegetation, and it takes a year for tadpoles to develop into adults.

Carpenter Frog

Eastern Spadefoot

(Scaphiopus holbrookii)

This is the only spadefoot occurring east of the Mississippi. It is found throughout most of Virginia, but not in highland areas. While it looks like one, it is not a true toad. Its base color includes variations of olive, brown, or black, with two irregular light lines down its back and a white to gray underside with reddish tubercles scattered about.

The eastern spadefoot measures 1¾ to 3½ inches. It has large, protruding eyes with cat-like vertical pupils. Being a nocturnal species, these eyes collect more light and enable it to see especially well at night. Its feet are hard with horny growths for digging, especially in the rear. It can dig a burrow quickly, burrowing and sinking backward out of sight. It favors the forests of the southeast where soil is loose, sandy or gravelly. It is seldom seen and lives mainly in burrows, often quite deep. It feeds on flies and spiders. The voice is a sharp, nasal, low-pitched grunt much like the call of a young crow.

Frog Tadpole

Toad Tadpole

Toad Eggs

Eastern Spadefoot

Spadefoots breed beginning in March, right after rains fill low spots and form vernal pools. The spadefoot has to work faster than other species and lay eggs before the pools dry up. The process often takes place in one night. Eggs are laid in gelatinous bands and attach to vegetation.

Eastern Tiger Salamander

(Ambystoma tigrinum)

This is the largest land-dwelling salamander, measuring 6 to 13½ inches. Its body is stout, fleshy, and slimy with a broad head, rounded snout, wide mouth, and small, widely-spaced eyes. Its basic color is dull black to deep brown with an olive-yellow belly and irregular large spots of yellowish-olive or yellowish-brown.

Tiger salamanders inhabit pine barrens, mountain woodlands, and wet meadows where they can burrow. They also live near marsh edges and other low, wet areas where they hide under vegetation and other debris. Tiger salamanders are voracious feeders, eating earthworms, insects, insect larvae, fish eggs, small crayfish, small frogs, tadpoles, and other salamanders.

It is an early spring breeder in fishless ponds. The egg-laying process is triggered by rain, after which they congregate. Mating takes place in temporary pools, small ponds, and the backwaters of small streams or creeks. The eggs adhere to submerged debris. Once hatched, the larvae are on their own. Transformation to adulthood takes place by July and August. There is an amphibious form, which has long, fern-like gills and remains in the water to live. Presently, breeding areas in Virginia have been confirmed in the George Washington National Forest and a site in the Coastal Plain.

Tiger Salamander amphibious form and egg mass

Give 'Em a Break

Amphibians need a stress break, especially during breeding season. Do your part to preserve water quality by *not* applying fertilizers and herbicides close to ponds, lakes, streams, and wetlands. Also critical to their survival: Don't introduce any species—fish, reptiles, even other salamanders—to these bodies of water.

Spike Knuth is an avid naturalist and wildlife artist. For over 30 years his artwork and writing have appeared in Virginia Wildlife. *Spike is also a member of the Virginia Outdoor Writers Association.*

Be Wild! Live Wild! Grow Wild! is a regular feature that highlights Virginia's Wildlife Action Plan, which is designed to unite natural resources agencies, sportsmen and women, conservationists and citizens in a common vision for the conservation of the Commonwealth's wildlife and habitats in which they live. To learn more or to become involved with this program, visit: bewildvirginia.org.

Tiger Salamander

Beekee

Sally Mills

Bees, unlike humans, have a sound sense of their life mission.

–William Longgood

by Sally Mills

During a move to a small farm in the late '90s, I found myself staring down an impressive line-up of beehives already in play. Their keeper, I soon discovered, had been carefully tending them for many years on this field in King & Queen County. At the time I had young children and, as he was a natural-born teacher, he graciously offered to show us his bees anytime we wanted to explore with him. So began my journey into the magical world of the European honey bee *(Apis mellifera)*.

Those early explorations with the late Joe May soon led to introductions with other beekeepers who, just like good hunting buddies, keep each other straight and always seem to find time to lend each other a hand. When Joe died suddenly one late December day, I was thrust into a more active caretaker role with the bees and soon leaned on one of my newfound friends, Tom O'Neil, who agreed to serve as my mentor.

Sally Mills

Beekeeper Tom O'Neil of Powhatan plants a variety of bee-friendly sunflowers in his expansive gardens.

Status Check

Anyone paying close attention to the health of the planet is well aware that honey bees are in trouble and battling a number of foes today: the Varroa and the tracheal mites, the introduced African honey bee, the continued erosion of prime habitat and dwindling nectar sources, and more recently, the mysterious Colony Collapse Disorder (CCD). The plight of the honey bee has been elevated to more public discussion in recent years, thanks to documentaries on

> "A big problem for honey bees is this loss of habitat. Our suburbs are creating a big green desert for nectavores," Mangum said.

ping 101

Sally Mills

Liquid gold collects in a top-bar frame, from a hive system used by Dr. Mangum which allows easy access for study purposes.

public television and features on network news, but much more attention and research are needed.

Public interest is genuine, and I am often asked by neighbors and friends, "So, how are the bees doing?" Not an easy question to answer.

What I discovered early on will be confirmed by any beekeeper 'worth his salt'. Studying bees is a life-long journey and one in which you end up with far more questions than answers. When it comes to honey bees, beekeepers will tell you the only constant is their innate ability to keep you guessing.

"Bees don't think. You never know what the bees are going to do." This was spoken in classic delivery, with just a hint of a smile, by Joe May—the lanky duck hunter and outdoorsman who had the softest of spots for the charming honey bee.

Sally Mills

Dr. Mangum checks the condition of honey bees in one of the observation frames in his research lab.

Sally Mills

Harvesting day entails lots of activities and the methodical transfer of frames of honeycomb to an extractor.

Sally Mills

Before frames can be removed, the bees have to be persuaded to leave temporarily.

Add to this shared wisdom the variables of weather brought on by changing precipitation patterns and the introductions of new pests and pesticides to fight them—now amplified by the global movement of goods, especially foods and plants—and it's easy to see that researchers and beekeepers have a mountain of possibilities to consider for why things might go wrong on any given day.

But beekeepers don't discourage easily, knowing what is at stake. Consider that one-third of our global food supply is made possible by pollinators! Of that potent force, the honey bee surely does the heavy lifting—an estimated 80% of all pollination performed by insects. Ensuring their health and viability is no trivial matter.

And while most of us are aware of their importance to agricultural crops, honey bees also play a crucial role in the success of forests, wetlands, and wildlife. According to state apiarist Keith Tignor, honey bees are classified as 'generalist' pollinators and aid in the reproduction and vitality of plants over a 12-square-mile radius of their nest! Tulip poplars, sourwood trees, and hollies are just some of the forest flora that benefit directly from their services. Such pollinating activities, Tignor reminds me, translate to diversified plant life in meadows and wetlands which ultimately benefit all wildlife.

Current Research

We are fortunate in Virginia to have dedicated researchers close at hand. Dr. Wyatt A. Mangum has been studying honey bees for 40-some years and is recognized internationally for his research. He and his wife, Dr. Suzanne Sumner, teach applied mathematics at the University of Mary Washington in Fredericksburg. Mangum got hooked early, at the young age of 10. He is a long-time member of the Richmond Beekeepers Association and has written the monthly biology column in the *American Bee Journal* for many years. Dr. Mangum studies honey bees at his apiaries in Virginia and North Carolina.

Among his research interests is a dark brown parasite the size of a pin head, the Varroa mite, which has been confirmed in the U.S. since 1987. While unclear how it got here, the mite's simultaneous appearance in Florida and Wisconsin suggests transport within the country most likely by truck.

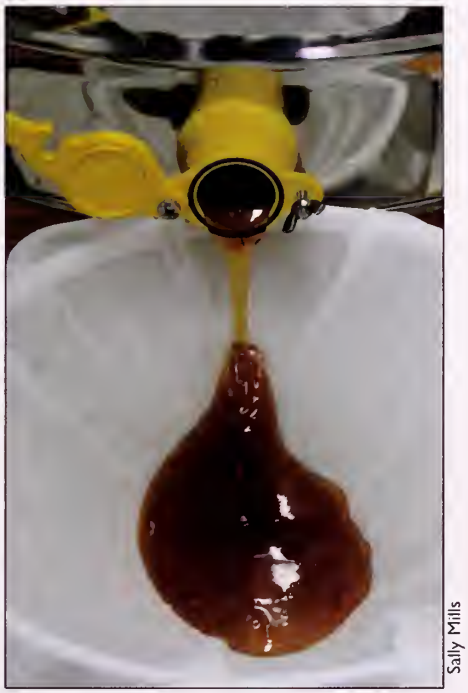
Varroa mite, S. Bauer, ARS/USDA

Inside the hive, the mite bites the female honey bee to draw hemolymph (blood), and in so doing, transmits to her a nasty virus. The mites also feed on developing bees growing in "brood" cells—the grow-out chambers for the eggs laid by the queen. The outcomes are several, but as described by Dr. Mangum, one can be a deformed wing on the newly

Sally Mills

Using a hot blade, Jim Frazier of Roanoke Rapids, NC, removes the top layer of wax from a frame to allow removal of the honey inside.

Sally Mills



Sally Mills

A centrifuge efficiently spins the honey out of many frames at one time. Cheese cloth is used to filter out loose wax before the honey is collected in a 5-gallon pail.

hatched bee. This 'classic' symptom is the one most easily recognized, as bees with deformed wings cannot fly. "Instead, they leave the hive and literally crawl to their deaths," he explained.

Tenacious like a tick, the Varroa mite remains attached to the adult bees until some sort of intervention—such as a chemical treatment—is introduced into the hive. Until then, the mite population will flourish and, as borne out by many research hives, devastate the workers and eventually kill the colony. Mangum suspects that other viruses also may be transmitted by this mite to the colony over time. He postulates that outside stresses, such as loss of favorable habitat and nectar-producing plants, compound the effects of the mite on an already weakened population.

Bee-Loved Plants

A honey bee must visit 5 million flowers to produce just a single pint of honey!

- Here is a short list of nectar producers that honey bees will thank you for: thistle, mustardseed, clover(s); dogwood, tulip poplar, honey locust, sourwood, blackberry, cherry, other fruit trees.
- Even a planter box full of African basil, clovers, sweet pea, buckwheat, or dwarf sunflowers on a balcony or patio would be a welcome stop-over for a foraging honey bee.

"A big problem for honey bees is this loss of habitat. Our suburbs are creating a big green desert for nectavores," Mangum explained.

And as you travel into more rural areas, land clearing and timber harvesting at aggressive rates and at larger scales are magnifying the problem. Swaths of barren land force honey bees to fly even longer distances to find food sources. According to Dr. Mangum, "They are working harder for less." That's saying a lot for a tiny insect that was already accustomed to traveling up to five miles to forage a meal.

The best development Dr. Mangum has witnessed in a long time? He is beginning to see evidence of bees *surviving* with the mite. In fact, he has devoted tremendous resources to this part of his research. On his farm, Mangum has engaged in methodical transfer of his research hives deeper and deeper into the woods behind his home in what he hopes will make the bees more resilient naturally, as well as maintain their wild 'bee sense'. In fact, his Virginia colonies have successfully carried on without any chemical treatment for the Varroa mite for four years.

Mangum believes that pesticides—used in the surrounding environment and introduced into hives by beekeepers—are having both lethal and non-lethal effects on honey

bees. Specifically, he is concerned about possible impacts on reproduction. He implores new hobbyists, as well as professional beekeepers, not to experiment with chemicals but always seek out the advice and treatments approved by the state apiarist. Mangum also cautions against the unnecessary movement of hives by beekeepers, which is very, very stressful on the bees.

When not counting mites and monitoring hive behavior, Mangum makes time to study honey bee genetics—partly to understand what has caused wild bee and colony extinctions of recent years. It's obvious he is most comfortable doing this on his Virginia farm, but he also travels to the far reaches of the globe to consult with other beekeepers. A lifelong researcher, he's curious to know what's next in store for this powerhouse pollinator.

Getting Involved

How much effort and expense are required to keep bees at the hobbyist level? It is wise to start small and go through a full year of seasons before judging your long-term commitment. Beekeeping at the 2-hive level can be accomplished for a modest dollar investment ($200 per hive, or less if you find used equipment). The time required varies by season, but throughout much of the year you'll need to set aside less than an hour a week. During spring and fall, the hives need attention in the form of expansion by supers, feeding, and pest control. And during the summer harvest, plan to commit a full weekend to honey extraction, bottling, and clean-up. The rest of those 55°-plus days, you'll want to set aside plenty of loafing, or hive monitoring, time.

Before you invest money in equipment, I suggest finding a beekeeper you might 'shadow', or attend a workshop—and learn what it takes to get up close and personal with a honey bee. If that goes well, invest in a good resource book and read it. You will soon be well on your way to knowing how and where to site your hives and begin with good habits—and therefore avoid self-induced problems with your hives. Also, check local ordinances where you live and adhere to any rules regarding hive placement and activity. Finally, scout your neighborhood—up to several miles in all directions—to be sure your bees will have plenty of access to nectar sources.

As with many hobbies, it's important to take the long view. Keeping two hives (vs. one) provides a bit of insurance that you won't lose everything if you make a costly mistake. If you do have a problem with a hive, you can easily lose the entire season and all honey production for the year, but as my hard-helmeted friends assure me, that's how you learn best.

Virginia has a strong support network for up-and-coming beekeepers. By joining a local group, you will have access to current research as well as be aware of any trends, problems, and solutions offered by other beekeepers. But be forewarned: Tending to honey bees is addictive and, well, mighty sweet. □

Editor Sally Mills has been tending bees for five years, thanks to the generous assistance of a few veteran beekeepers.

Additional Resources

- *Beekeeping for Dummies*, by Howland Blackiston; 2001, Wiley Publishing, Inc., IN.
- *The Queen Must Die*, by William Longgood; 1985, W.W. Norton & Company, Inc., NY.
- To find a local beekeeping group, www.virginiabeekeepers.org.
- Virginia Department of Agriculture and Consumer Services, www.vdacs.virginia.gov.

©Gregory J. Pels

Honey bees and other insects account for the successful pollination of one-third of our fruits and vegetables, including apple trees (R), as well as a host of beautiful flowers.

Tomorrow's Anglers

essay and photos by King Montgomery

A young girl, almost a teenager, walked into the restaurant oblivious to her mom holding open the door. They headed toward a table and sat down. The girl never once looked up or stopped moving her thumbs across the face of the electronic device in her hands.

Would she ever see the world around her, particularly the outdoors? Would she sit on a river bank or in a boat and cast a line with bait lure or fly to catch a fish? Would she grow to appreciate nature and care for its resources? I hope so.

I worry that too many kids are enslaved in an electronic fog of computers, intricate games, cell phones, iPods, Blackberries, one device after another. It is up to us to introduce kids to the natural world instead, like the joys of being outside and fishing, where the living world surpasses the artificial one in its subtlety, sophistication, and wholeness.

In his seminal 2005 book, *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder,* Richard Louv warns of the severe decline in participation of youth in outdoor activities. He links the lack of nature in the lives of children to such disturbing childhood trends as attention-deficit disorders, obesity, and depression.

During research in which Louv interviewed over 3,000 children, the child's relationship—or non-relationship—with nature surfaced, and he was mortified at their near complete lack of interface with the natural world. The core of the affliction of our children is not just their addiction to electronic doo-dads but, according to Louv, "... society's relinquishment of green spaces to development, parents' exaggerated fears of natural (and human) predators, and the threats of lawsuits and vandalism that has prompted community officials to forbid access to their land."

Now is the time to take a young person to the nearest pond, river, lake or pier and teach him the basics of fishing. Your efforts will be rewarded with a well-rounded, environmentally conscious person. Follow the lead of one of my favorite outdoor writers, Ted Leeson, when he tells how it all began for him:

"Thirty-five years ago, I toddled off to Turtle Creek with a cane pole and worms and returned with a six-inch smallmouth and a monkey on my back. I ate the bass and have been feeding the monkey ever since."

The Habit of Rivers (1994)

A long-time contributor to Virginia Wildlife, *King Montgomery does use a computer occasionally; contact him at kingangler1@aol.com.*

BENEATH THE

Cooper students befriend an endangered amphibian.

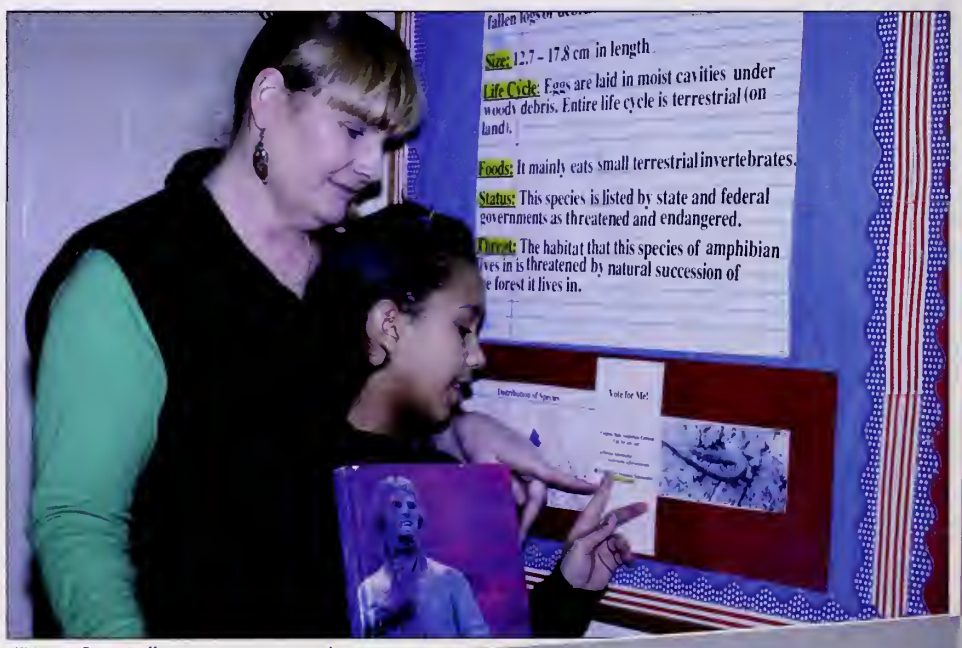
essay and photos by Gail Brown

Extensive research, field observations, and time on the Capitol Classroom Web site promote integration of science and civics.

With a face too broad, no lungs, bulging eyes, and a nemesis called "red-backed," you need all the friends you can get. Fortunately for the Shenandoah salamander *(Plethodon shenandoah)*, everyone at Hampton's Cooper Elementary Magnet School for Technology (Cooper) is on his—or her—side. The students at Cooper have developed a big sister/big brother relationship with this endangered, yet spunky, amphibian, and teacher Shirley Sypolt's 4-H Environmental Club is prepared to travel to Richmond to help get their little friend the recognition they believe it deserves. Their goal: work with their delegate, Jeion Ward, to convince the 2010 General Assembly to name the Shenandoah salamander Virginia's official state amphibian.

It all started five years ago when Sypolt's 4-H club received their Virginia Naturally School banner. Each banner showcases a state emblem relating to the environment, and the banners are given to schools in recognition of their environmental stewardship efforts during the previous school year.

That's the good news. The commotion started after the banner was displayed and the kids became curious about how and why state emblems were selected. When they discovered Virginia has far fewer emblems than neighboring states, civic pride—coupled with knowledge of Virginia's vast natural resources—led the students to feel, well, short-changed! And their search for an additional ambassador of what is wild and unique to the Old Dominion began.



"Vote for Me" posters, campaign speeches, and a school-wide election help students understand how bills become laws.

Research, discussion, and compromise led Sypolt's students to select the Shenandoah Mountain salamander to represent our state. But after years of campaigning, followed by rejection in the halls of govern-

ment, the club had to accept the inevitable—this amphibian would never be the state amphibian. Younger siblings continued the mission, however, and today they believe they have found a winner with a similar name.

Further exploration led this group to the Shenandoah salamander, 12 centimeters of pluck and verve residing only on the north and northwestern talus slopes of The Pinnacle, Hawksbill, and Stony Man mountains in Virginia's Shenandoah National Park. There, *Plethodon shenandoah* negotiates territorial disputes with the more aggressive red-backed salamander and, while forced into a stark and less desirable ecosystem, it's believed possible our endangered hero can live up to 25 years!

So here we have it: Young scientists persistently working around the hurdles faced by those who challenge the status quo; an endangered amphibian endemic to Virginia; a state delegate willing to once again present a bill on the students' (and salamander's) behalf; and legislators perhaps questioning the value of something that hides in rocks and breathes through its skin.

Can the kids convince the 2010 General Assembly that this tiny, tenacious amphibian should join the brook trout, the cardinal, and the big-eared bat as another representative of Virginia's diverse wildlife? Will the adults look beneath the surface and keep an open mind as to what is and isn't beautiful? Sypolt's 4-H club certainly hopes so: They've made a great banner sketch. And they think a brown background should work just fine. □

Gail Brown is a retired principal for Chesterfield County Public Schools. She is a lifelong learner and educator, and her teaching and administrative experiences in grades K-12 have taught her that project-based environmental programs teach science standards, promote core values, and provide exciting educational experiences for the entire community.

DGIF Wildlife Diversity Biologist John Kleopfer shares information about amphibians. Cooper's outdoor classroom deck and wild areas provide opportunities for field work and observation.

Journal

2009 Outdoor Calendar of Events

Unless otherwise noted, for current information and registration on workshops go to the "Upcoming Events" page on the Department's Web site at www.HuntFishVA.com or call 804-367-7800.

May 2: *Chief Charlie's Kids Fishing Day*, Grottoes.

May 8–10: *Great Dismal Swamp Birding Festival*, Suffolk; www.fws.gov/northeast/greatdismalswamp/.

May 9: *International Migratory Bird Celebration*, Chincoteague National Wildlife Refuge.

May 15–17: *Becoming an Outdoors-Woman®*, Holiday Lake 4-H Center, Appomattox. Ages 18 and up.

May 16: Spring Turkey season closes.

May 16–22: *National Safe Boating Week.*

May 29–31: *Mountain Lake Migratory Bird Festival*, Pembroke; www.mountainlakebirding.com.

June 5–7: *Free Freshwater and Saltwater Fishing Days.*

June 13: *Ladies' Day Shooting (Handgun or Shotgun) Clinics*, Cavalier Rifle & Pistol Club; 9:00 a.m.–1:00 p.m. For reservations call (804) 370-7565 or e-mail H.Baskerville@comcast.net.

June 16: *Smallmouth Fishing Workshop*, New River, Radford.

June 18, 20, and 25: *Lights, Camera, Action: Photographing Flowers in the Garden*, with Lynda Richardson; Lewis Ginter Botanical Gardens, Richmond, www.lewisginter.org.

June 30: *Float Fishing the James River*, Buckingham.

July 28: *Flat Out Catfish Workshop I*, James River, Richmond. □

by Beth Hester

Animal & Sporting Artists in America
F. Turner Reuter, Jr.
2008 The National Sporting Library in Middleburg, Virginia
ISBN-13: 978-0-9792441-1-7
880 pages, 2,384 artist biographies, 418 illustrations, color plates
Standard Edition in Slipcase
Available through Red Fox Fine Art: www.redfoxfineart.com

F. Turner Reuter, Jr. is a Virginia native who grew up immersed in the rhythms of country life. Seasonal rounds of planting and harvesting, of hunting and fishing, the excitement of steeplechasing, the preparation of livestock for show; it's as if every aspect of Turner's life eventually conspired to assist him in the creation of *Animal and Sporting Artists in America*, a singular achievement in the realm of American art history. Turner, who has been a collector and dealer of sporting art for over forty years, is Curator of Fine Arts at The National Sporting Library in Middleburg. He has also earned Level III shooting instructor classification from The National Sporting Clays Association, and is the innkeeper/owner of Middleburg's Red Fox Inn. His new book is the result of decades of extensive travel and painstaking research.

Released in October 2008, this is the first, comprehensive reference work devoted to the American sporting landscape, and the painters, sculptors and printmakers who captured and chronicled a particularly American way of life. Sporting art in America reflects umbilical ties to the mother country, and upholds certain English traditions, but Turner champions the fact that American sporting art has a distinctive quality and resonance.

This sumptuous volume covers almost four hundred years of sporting and animal art. The artist biographies are listed in alphabetical order, and among them you'll find familiar names like John James Audubon, American Impressionist painter Childe Hassam, Thomas Eakins, Winslow Homer, Rockwell Kent, and Frederick Remington. The true breadth of scholarship, and also good humor, becomes startlingly apparent, when you notice that on page 484, nestled among classic color plates of pointing setters, leaping trout, fishing creels and racing thoroughbreds, is the infamous painting generally known to the layman as, 'those poker-playing dogs,' but which is more accurately titled, 'Judge St. Bernard Wins on a Bluff' painted by Cassius Marcellus Coolidge in 1903.

Some of the documented artists like Phillip Russell Goodwin created iconic American images familiar to generations through their appearance in print and marketing materials; Goodwin created the Winchester Arms cowboy, and his illustrations graced the pages of *Outdoor Life* and *The Saturday Evening Post*. Recipient of numerous commissions, Adalin Wichman of Kentucky created sculptures and paintings relating to thoroughbred horse racing; she is known for her equine-themed frieze in the Lexington Public Library rotunda.

Animal and Sporting Artists in America is a piece of serious scholarship, a place where heart and mind can connect to explore, as Turner puts it, "the relationship between art and country life." In addition to artist biographies, there is an extensive bibliography that invites further study of the volume's featured topics. The book is a masterwork that will reward the reader many times over. □

©Bruce Ingram

"You forgot to stop the paper."

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The James River Runoff Rundown
From Iron Gate to Ft. Monroe
July 11, 2009

The James River has been called America's Founding River for the defining role it has played in our history. On July 11, 2009, volunteers from across the Commonwealth will honor that history by "running" the James—the entire 340-mile length of the main stem—in one day, as a benefit for the James River Association (JRA), the non-profit group with the mission of preserving and protecting every mile of the James River watershed. The JRA and its members invite you to join them as they celebrate and help support river restoration efforts at the same time.

The Runoff Rundown will divide the river into individual sections of 10 to 12 miles, and river runners or teams of runners will each paddle a section, so that the combined effort covers the entire James in a day. As part of their run, paddlers will enjoy a day on the river and will be encouraged to seek pledges to benefit JRA.

The organization is currently looking to enlist runners and run captains at www.runoffrundown.org. Additional information regarding participation can be found at the same site.

This report was contributed by JRA member, Harry Byrd, IV.

Lee Walker

Above: *2009 Overall State Champions for the Virginia National Archery in the Schools Program Tournament, Hidden Valley High School, Roanoke, VA.*

Sally Mills

Above: *The Department is accepting applications for this year's Virginia Naturally school recognition program from May 1 until June 30. Criteria and applications can be found online, at www.dgif.virginia.gov/education/school-recognition. First-year schools will receive a plaque, such as the one held here by Colleen Anders, Assistant Principal of Bettie Weaver Elementary School. Schools continuing in the program receive a pennant, shown online. For more information, contact Suzie Gilley at suzie.gilley@dgif.virginia.gov or (804) 367-0188.*

On The Water

by Tom Guess

Thinking Back!

It was one of those mornings when I noticed the sun shining through the windows of our home at a little bit different angle. I stepped outside and noticed by the flurry of activity that the wildlife seemed to have renewed energy with the warmer temps. The heat reminded me how, when I was boy, I couldn't wait to hit a local body of water with my friends to do some fishing.

We usually went to the Blackwater or Nottoway or to a private farm pond; it really didn't matter as long as we were fishing somewhere. I remember the countless hours I spent on one particular pond where the dam had broken numerous times, and the only thing keeping water in it was the hard work and construction of a nearby den of beavers. I think we knew there were no fish in that pond. Nevertheless, we fished throughout the long, hot summer days as if the pond had miraculously stocked itself the night before.

I guess the point wasn't so much fishing as it was the fun we had bragging and dreaming about that one big bass that might strike our line, or the fact that we loved the water and took any opportunity we could to be near it, on it, or in it.

One time my now brother-in-law and I planned a trip to the Nottoway River on a warm day. We were up with the sun, ready to "hit the river." Our first task was to go out to the garage and hurriedly find our most important equipment: fishing rods, tackle boxes, a cooler, and a bucket. We dusted off some old life jackets tucked in the rafters, grabbed some paddles and a line with some window counter-weights for an anchor, and even grabbed a trolling motor and battery sitting in the corner, just beckoning us to take them on our trip!

Our last task was to meet up with a friend to borrow his old aluminum canoe. Wow, just imagine—fishing from a 12-foot canoe on the Nottoway River with a trolling motor! Could it get much better? Once we had the canoe loaded, we picked up some night crawlers and snacks.

We got to the river, loaded the boat, attached the motor, sat on our life jackets, and headed upstream to do some fishing. We caught quite a few that day: bluegills, brim, crappie, bass, and even a catfish or two. After our motor's battery died, we decided to drift downstream for a few more casts and swim to escape the gnats and the mid-day heat.

As we departed for home, we talked about how it was the perfect day fishing and boating on the river … Or was it?

Looking back, we were well equipped for our trip but could have done a few things differently. Technically, we were in compliance with the law by having them on board, but it's always better to *wear* your life jacket.

And by attaching a trolling motor to our friend's canoe, we turned it into a motorboat, meaning it needed appropriate certification and decals applied. By attaching a motor we were required by law to have a U.S. Coast Guard-approved, Type IV flotation device on board.

And while we told our family we were going fishing on the Nottoway and mentioned which bridge, it may have been a good idea to tell them our intended route in case we didn't return at the agreed-upon time. Notwithstanding these oversights, we had a great day and—as is often the case—nothing went wrong! □

Tom Guess serves as the statewide coordinator for the Boating Safety Education Program at the DGIF.

Dining In

by Ken and Maria Perrotte

Charcoal Roasted Whole Rockfish

Anywhere throughout coastal Virginia, the striped bass (locally known as rockfish) is a saltwater fishing staple. Landlocked stripers are also popular quarry in places such as Smith Mountain Lake and Lake Anna.

Anglers targeting big fish find the spring season, when fish are migrating through the Chesapeake to spawn in one of its many tributaries, a great time to catch a trophy fish. Similarly, the late fall and winter seasons are excellent times to hook into giant fish more than 50 inches long and weighing up to 60 pounds.

As with most fish and game, there is *taxidermy* trophy big and there is *dinner plate* trophy big. While monster-sized fish make for great stories and wall mounts, rockfish between 20 to 36 inches seem to make the best eating.

We always try to save a spring rockfish in the 29- to 36-inch or 8- to 18-pound range for roasting whole. This is a variation on an old-fashioned pig pickin'—only we're using whole rockfish. It's a hit at any gathering of friends and family. The fish is typically reduced to cleanly-picked bones within minutes. This cooking method also works for smaller fish.

Make sure the rockfish is fully dressed, scrubbing and rinsing the interior cavity along the backbone. Remove the gills and ventral fins. Completely scale the fish from tail to gill plates.

Ingredients can be varied based on fish size.

Wine pairings: A nice crisp sauvignon blanc or pinot grigio can't be beat. If the fish has had a little smoke added, try a moderately oaked chardonnay.

Recommended side dishes: Pasta salad, tossed salad or, simply, sliced ripe tomatoes and cucumbers match well. Provide a Mediterranean mix of olives and marinated peppers as a warm-up. Steamed or roasted tender asparagus, in season, is also a great accompaniment.

Ingredients

- 1 rockfish (striped bass) 8 to12 pounds
- 1 cup white wine (sauvignon blanc works well, but almost any dry white wine will suffice)
- 1 stick of butter (of course you can substitute margarine—but it won't taste as good)
- 3 tablespoons fresh ground black pepper or a lemon pepper blend
- 1 lemon sliced into ⅛-inch diameter pieces
- 3 tablespoons of fresh, finely chopped garlic
- 3 teaspoons salt
- ½ cup olive oil

Wrap Your Rock

Get your gas grill ready or fire up the charcoal. We've cooked fish so big that they had to be cooked in a ground bed of charcoals atop cooking grates spread over concrete blocks. If you cook a big fish over coals on the ground, make sure you have something that'll block the wind and tent the cooking area to enable the fish to heat properly, especially if it's a chilly day.

Spread a sheet of heavy-duty aluminum foil that's about 6 inches longer and 4 inches wider than the fish. Lay the fish atop the sheet. Open the body cavity and sprinkle seasonings (salt, pepper, garlic) and 4 or 5 pats of butter evenly spaced from head to tail. Add 3 to 4 slices of fresh lemon. Using a sharp, small knife, make 1-inch incisions in the thick fleshy area along the side of the fish about an inch below the dorsal fin. Insert pats of butter into the slits. Season the outside skin of the fish, then flip it over and repeat the process. Tear another sheet of foil and place over the fish; seal the top and bottom sheets together, rolling the edges and pinching tightly. Just before completely sealing, slowly pour in the white wine. Finish sealing.

Place the rockfish on the grill about 6 inches from the coals. Turn after 30 minutes and cook 20 to 30 minutes longer. Carefully fold back the foil and inspect for doneness. If thoroughly cooked, remove and drain liquid, transfer to a serving platter, and garnish with ample fresh lemon wedges. Be careful when transferring the fish because, cooked this way, it will literally want to fall off the bone.

An option for those wanting crispy skin is to cook the fish in the foil for about 20 minutes, then turn and cook another 12-15 minutes. Carefully remove from the foil and then finish the fish in a broiler or atop a grill (amply coated with olive oil). This will help crisp the skin and add an aesthetic that some people prefer; just don't let the fish dry out. The other option is to add a couple of wood chips to your grill and then open the foil for the last 10 minutes of cooking to allow some liquid to steam off and the smoke flavor to infuse. Don't smoke it too much, though. And, if you decide to add a smoky flavor, back off on the lemon. A smoke-lemon combo never floated my boat. □

Photo Tips

by Lynda Richardson

April Showers Bring ... May Flowers!

One of the greatest things about May is the flowers, millions of them blooming all across the state! One of my favorite places to witness a spectacular sea of wildflowers is the G. Richard Thompson Wildlife Management Area in Northern Virginia. Thought to hold the largest population of large-flowered trillium in the country, this unbelievable display of some 14 million flowers can be photographed in May.

As far as the eye can see, white, pink, and purplish trillium flowers float low over the landscape, making it nearly impossible to decide where to start! To make matters worse, the flowers of the common bladderwort (yellow), yellow and purple violets, wild geranium (purple), star chickweed (white), yellow lady slipper, showy orchids (pink and white), and coltsfoot (yellow) can be found here too. Wow!

Normally, I start photographing early in the morning for the best light and the least amount of air movement. I look for the most appealing overall landscape views showing the most flowers. To really capture these scenes, wide-angled lenses ranging from 17mm to 35mm are the best option. A tripod is very helpful because it encourages you to take your time and carefully compose your shots. Just be careful where you place the tripod legs.

Walking around the edges of the vast array of trillium I am careful not to step on any if I can help it. Once I think I've got photographs that reveal the overall feeling of the place, I start working closer to the flowers themselves, sometimes using telephoto lenses to compress and clean up backgrounds and, other times, a macro lens to get the most intimate shots. I will sometimes sit for hours in one spot.

Small photo reflectors or even white pieces of paper can help create "fill-light," which will eliminate distracting shadow areas. You may also want to use a small flash for this, but be careful that you don't over-expose the subject with too much flash or create black backgrounds (unless you want them) by forgetting to set your shutter speed properly.

© Lynda Richardson

In May, the large-flowered trillium is the featured flower at the G. Richard Thompson Wildlife Management Area. This one was photographed in overcast light created when I blocked the sun from the scene with my body.

If you hike down the fire road trails, you may come across flowers such as the showy orchid and yellow lady slipper. You won't find these flowers in huge concentrations like the trillium but as individuals poking out from the fallen leaves, delicate and breath-taking. Make sure you don't miss them.

If we got those April showers, I'm sure we'll get trillium—millions of them. So start planning your visit today. I'll see you there! □

You are invited to submit one to five of your best photographs to "Image of the Month," Virginia Wildlife, P.O. Box 11104, 4010 West Broad Street, Richmond, VA 23230-1104. Send original slides, super high-quality prints, or high-res jpeg, tiff, or raw files on disk and include a self-addressed, stamped envelope or other shipping method for return. Also, please include any pertinent information regarding how and where you captured the image and what camera and settings you used, along with your phone number. We look forward to seeing and sharing your work with the readers of *Virginia Wildlife*!

Image of the Month

Congratulations to Robert C. Peace of Williamsburg for his beautiful photograph of a tiger swallowtail on a bougainvillea plant taken near home. Robert used a Canon 40D digital SLR camera, telephoto lens, and shot at 1/500th, f13.0, ISO 500.

National Safe Boating Week

May 16 - 22, 2009

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www.dgif.virginia.gov

Virginia Wildlife Outdoor Catalog

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